I.A.E. Knopf

(NOT FOR PUBLICATION)

612

INTERMOUNTAIN FOREST AND RANGE EXPERIMENT STATION
Reed W. Bailey, Director
U. S. Department of Agriculture
Forest Service

Teton National Forest
Detection and Appraisal Survey
Fall 1956

By
R. I. Washburn, Entomologist

Division of Forest Insect Research
Ogden, Utah

TETON NATIONAL FOREST
Detection and Appraisal Survey
Fall 1956

An aerial survey of the Teton National Forest was conducted this fall to detect, locate and describe unusual forest insect activity. Unfortunately, the wilderness area was not covered by the aerial survey due to poor weather conditions. All areas suspected of containing mountain pine beetle Dendroctonus monticolae Hopk. infestations were appraised by a ground crew supplied by the Teton National Forest. New areas containing groups of lodgepole pine killed by the mountain pine beetle were located in Ditch Creek, West Shoal Creek, and Sand Rock Creek by the aerial survey. In addition, a survey was conducted to assess the results of the Dell Creek Mountain pine beetle control project.

Ditch Creek

The Ditch Creek infestation is concentrated mainly between Ditch Creek and Antelope Point, but there is a scattering of infested trees between the forks of Ditch Creek. The ground appraisal shows that altogether there are probably between 350 and 450 currently infested trees on about 340 acres. The buildup ratio (new attacked trees to trees killed last year) is in the neighborhood of 1 to 1, but the grouping tendency has increased.

West Shoal Creek

The West Shoal Creek epidemic area is located on parts of Sections 20, 30, 29, and 28, Township 39 North, Range 113 West. The infestation is actually in two small areas divided by the Granite Creek-Shoal Creek trail. One area of about 130 acres contains approximately 280 infested trees, while the other has about 90 trees on 230 acres. The infested trees are mostly in small groups of 3 to 10 trees.

Sand Rock Creek

All of the infestation in Sand Rock Creek is located above the drift fence in Sections 12, 13, and 14, Township 37 North, Range 112 West. Most of the infested trees are within two small centers totaling about 40 acres. In addition, there are a few scattered infested trees (about 20) just across the creek in the large patch of pole sized trees between Sand Rock and Sour Moose Creek. The 420 infested trees estimated for the 40 acres of hot spot represents slightly more than 10 trees per acre.

Dell Creek-Riling Draw

The Dell Creek-Riling Draw infested area totals about 2500 acres. Of this, about 2300 acres were treated in the 1956 control project. The

approximately 100 infested trees estimated to be within the 1956 project area are widely scattered and appear mostly as singles. Outside the project area, mostly in Riling Draw, there appeared to be about 80 infested trees. These trees are somewhat less scattered and do appear in small groups. The estimate of about 180 infested trees for the total area compared to the 3483 trees treated in 1956 represents a reduction of just under 95 percent.

No centers of heavy or threatening activity caused by forest insects other than the mountain pine beetle were detected from the air. It was noted, however, that the Douglas-fir beetle, Dendroctonus pseudotsugae (Hopk.) was causing considerable mortality in some small stands of Douglas-fir. In no case did it appear that the activity had increased to any great extent over the damage detected by the 1955 aerial survey. Actually, the only real concentration of Douglas-fir beetle detected is located in the upper third of Shoal Creek.

DISCUSSION

There seems to be no question that the mountain pine beetle has developed epidemic tendencies within the lodgepole pine forests of the Teton National Forest. This means that there is the possibility that from the existing "hot spots" a large scale epidemic might develop. Certainly, from the entomological standpoint, it would be desirable to do everything possible to reduce the existing potential in an effort to prevent or minimize any developing epidemic. The lodgepole pine timber should be subjected to close inspection by aerial and ground detection forces to locate any and all mountain pine beetle hot spots as they develop.

No other forest insect problem exists on the forest that would warrant emergency action. Whenever possible logging of Douglas-fir should be directed towards the Douglas-fir beetle infested timber.